

*William E. Wood's imp't in
Base-burning Fireplace Heaters.*

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PATENTED AUG 1 1871

Fig. 1.

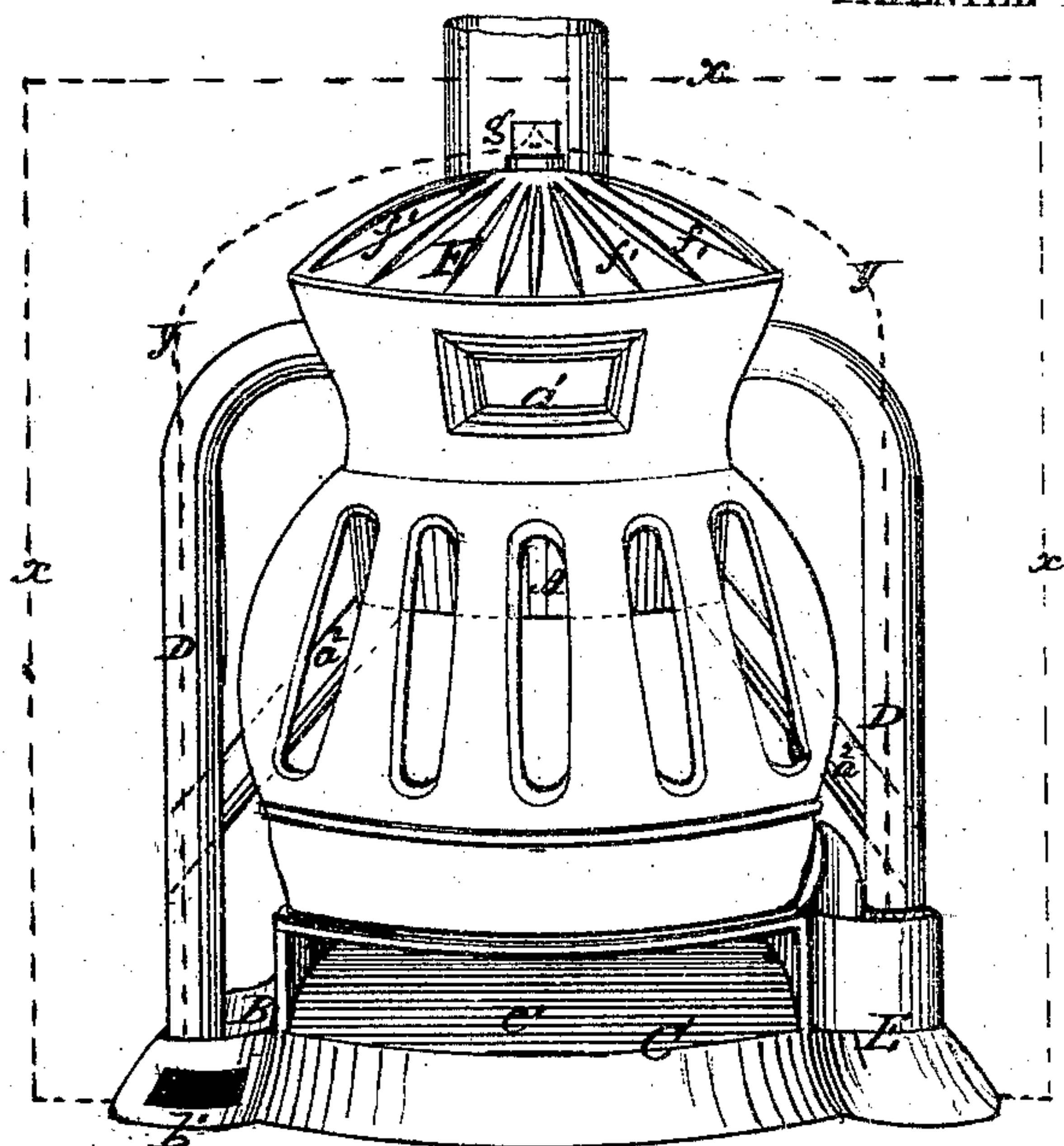


Fig. 2.

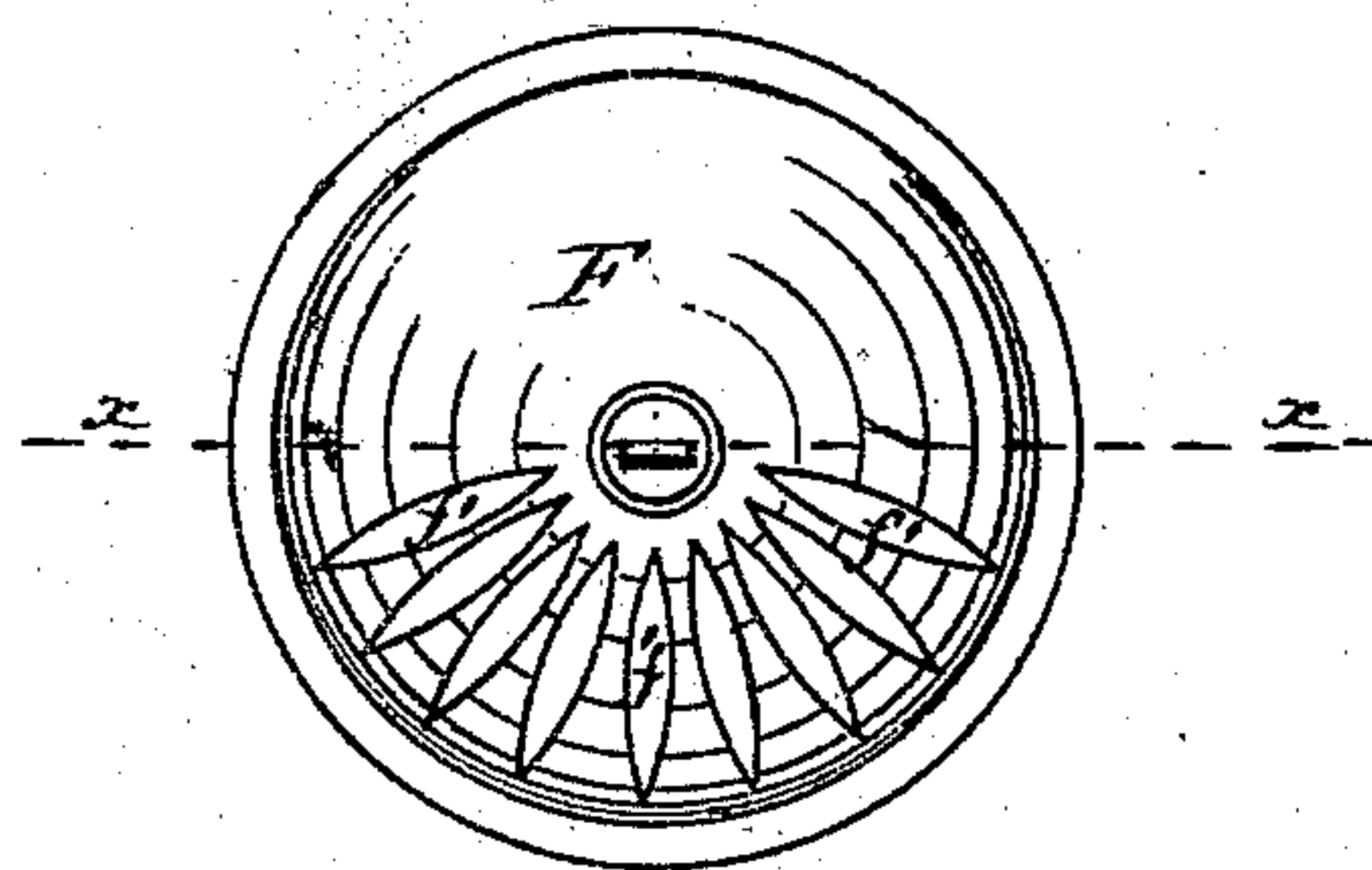


Fig. 3.

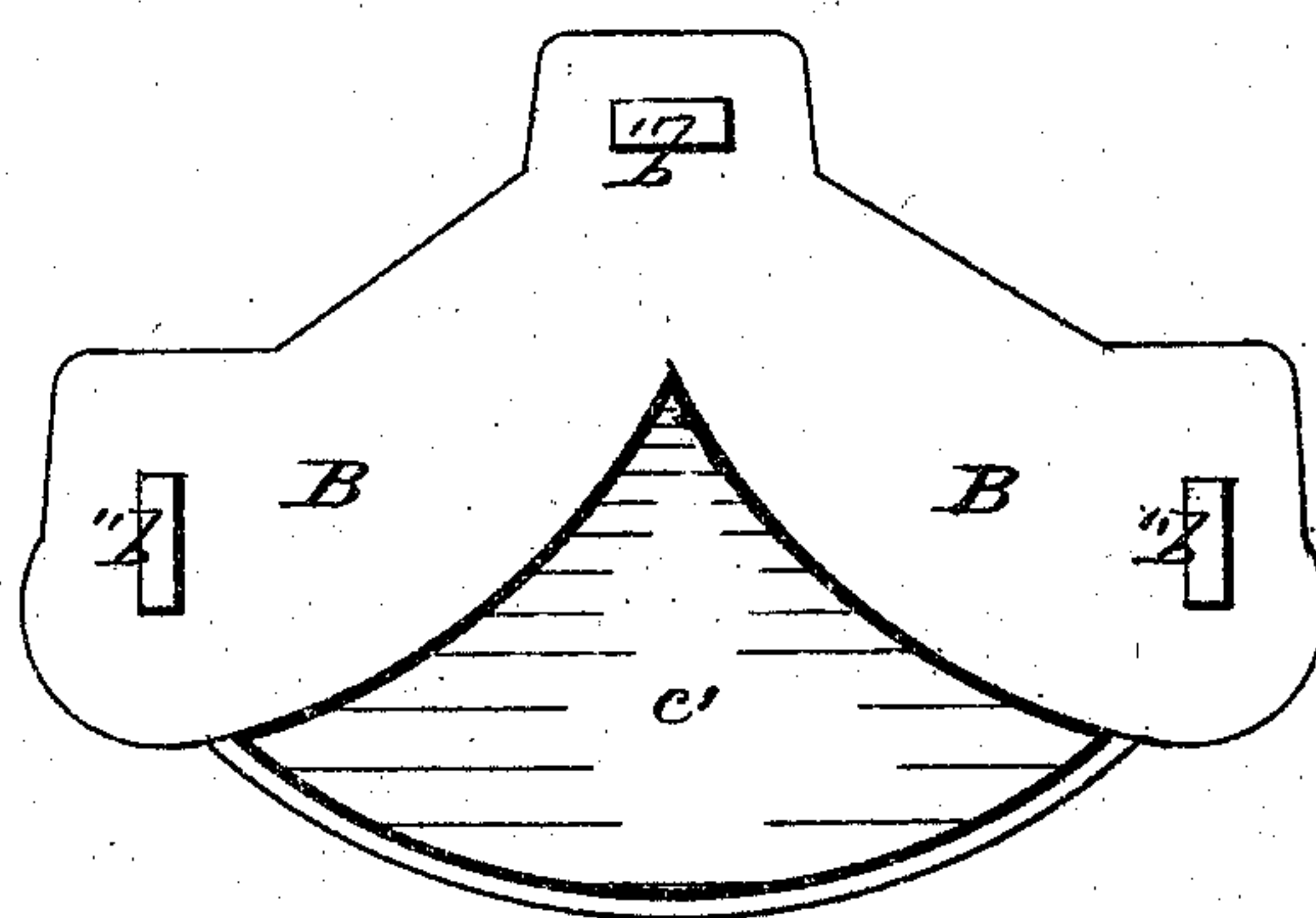
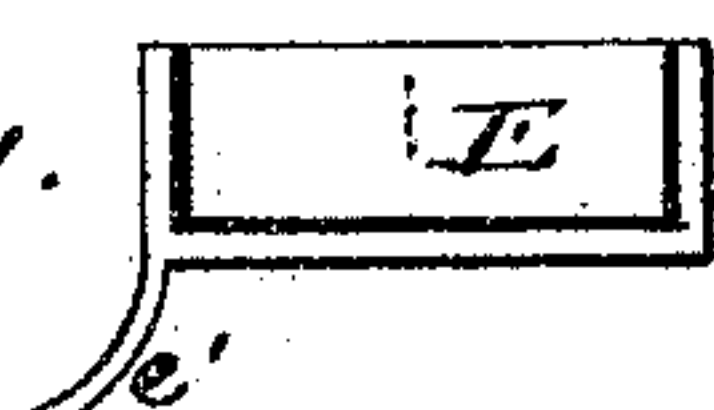


Fig. 4.



Witnesses:

Wm. Wheeler
Wm. W. Piner



Fig. 5.

Inventor:

Wm E Wood

UNITED STATES PATENT OFFICE.

WILLIAM E. WOOD, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN BASE-BURNING FIRE-PLACE HEATERS.

Specification forming part of Letters Patent No. 117,585, dated August 1, 1871.

To all whom it may concern:

Be it known that I, WILLIAM E. WOOD, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain Improvements in Base-Burning Fire-Place Heaters, of which the following is a specification:

The first part of my invention relates to the construction and mode of applying the top plate of the heater so as to turn around a center-post, whereby the whole current of the hot air rising within the air-heating chamber in the interior of the heater can be discharged either directly into the room containing the said heater or upward into the rooms above by simply turning the said top plate half-way around. The second part of my invention relates to the adjustable arrangement of the removable water-evaporating vessels in positions, respectively, on the top of the horizontal flues and between the sides of the ash-pit and the respective upright heat-radiating down-draught flues; the object of this part of my invention being to produce the required moisture by keeping the water steadily at any temperature sufficiently warm for the purpose without causing it to rise near the boiling-point.

Figure 1 is a front elevation of a base-burning fire-place heater embodying my invention, the water-evaporating vessel belonging to the left-hand side of the heater having been removed. Fig. 2 is a plan view of the top plate of the heater detached, the dotted lines $x y$ in both figures indicating the usual fire-board. Fig. 3 is a plan view of the under side of the bottom plate of the heater detached. Fig. 4 is a vertical longitudinal section of the water-evaporating vessel detached from its operating position, the left-hand side of the heater shown in Fig. 1; and Fig. 5 is a plan view of the same vessel.

The interior of the body of the heater (see Fig. 1) is provided with a fuel-magazine, A, adapted for top feeding through a door-opening, a' ; and the walls of the magazine are double, and thus produce an annular air-heating chamber which is constantly supplied with fresh air through pipes $a^2 a^2$, the warmed air passing out through suitable holes in the top plate of the annular chamber; all arranged to operate substantially as described in the Letters Patent granted to me dated March 29, 1870. The horizontal flues B B of the base are arranged below

the horizontal plane of the bottom plate c' of the ash-pit C, and consequently the side-radiating down-draught flues D D are permitted to be extended downward in length equal to the depth of the said ash-pit, and their heat-radiating surfaces increased proportionately; and, besides, this depression of the horizontal draught-flues B B affords more appropriate positions for the moisture-producing vessels, inasmuch as the spaces afforded between the sides of the ash-pit C and the said respective down-draught flues D D will always be warm enough to produce a sufficiency of aqueous vapor from the water-vessels thereat without at any time causing the water to boil or evaporate too rapidly. The evaporating-vessels E E are made to fit into the space between the sides of the ash-pit and the respective down-draught flues D D, and with their front ends widened and curved to around the front sides of the respective flues D D, and each with a downward-projecting curved plate, which will fit around over the clean-out hole b^1 in front of each of the flues B. The heater rests upon the three small blocks $b^2 b^2 b^2$. The top plate F of the heater is concavo-convex, and is held down upon the body of the heater with its convex side upward by means of a vertical post in the center of the top plate of the fuel-magazine, which extends upward and passes through its center, and thus serves as a pivot for the rotary or oscillatory motions of the plate F, the outer edge of the said plate being flanged downward so as to fit loosely around the outside of the upper edge of the body of the heater. Nearly one-half of the plate F (divided diametrically) has numerous openings or radial slots, $f' f'$, so arranged that if the said plate be turned with all the slots f' outside of the usual fire-board (indicated by the dotted lines $x y$ in Fig. 1) the hot air rising from the annular chamber A will pass outward into the room in which the heater is located; but when the said plate is turned half-way around, or so as to carry the slotted half behind the fire-board, all the heat rising from the said annular chamber will pass upward through the usual open flue to the rooms above.

I claim as my invention—

1. The rotary or oscillatory top plate F, perforated or slotted on one side of its diameter, as described, and pivoted to the heater so as to be

readily operated in relation to the fire-board $x y$, substantially as and for the purposes hereinbefore set forth and described.

2. The arrangement of appropriate water-evaporating vessels E E in positions, respectively, on the top of the horizontal side-flues B B and between and in contact with the sides of the

ash-pit C and the down-draught flues D D, substantially as and for the purpose hereinbefore set forth and described.

WM. E. WOOD.

Witnesses:

C. A. WHEELER,
ALX. M. BRISCOE.